

Predictions within the Trust

November 20, 2014

Nate Silver

Professional internet poker
baseball stats

Education U Chicago
London School of Economics

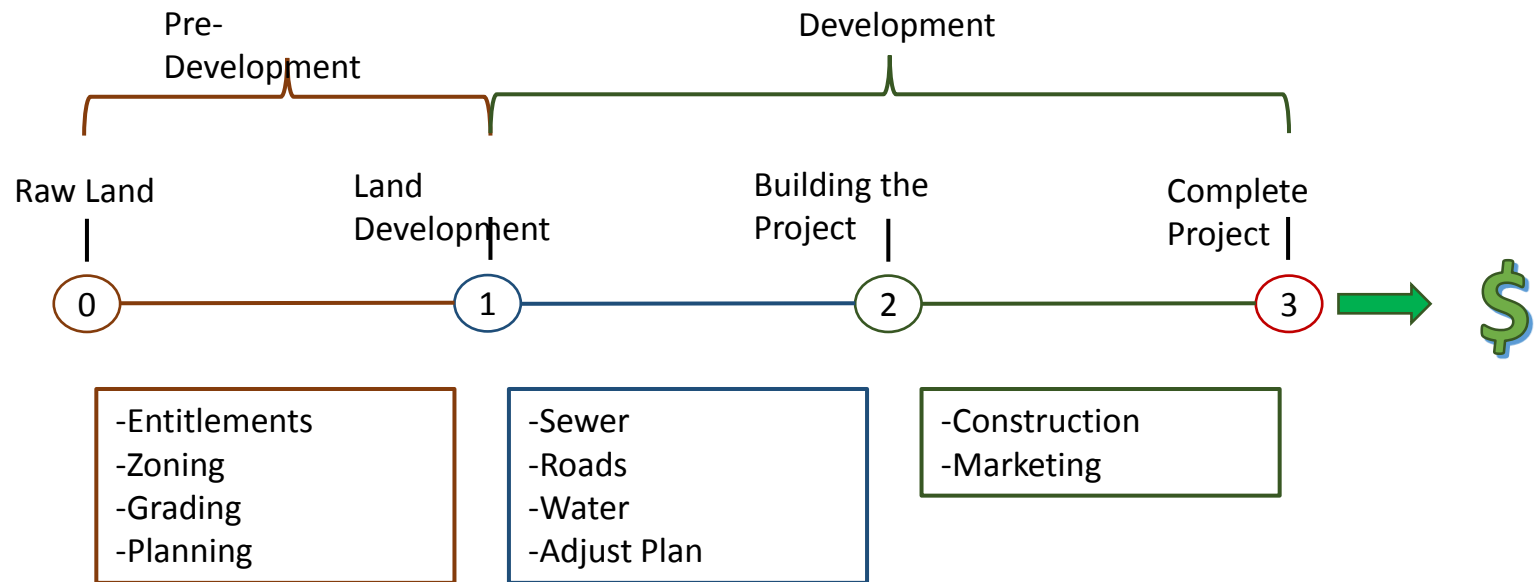
Predicted 2008
49/50 Presidential
35/35 on Senate

Founder
www.fivethirtyeight.com



We are all
making predictions
all the time

The Real Estate Development Process





NASDAQ 4,689 +8.40 +0.18% ▲

Oil, other commodities will be in the dumps for another decade

By **Howard Gold**

Published: Nov 14, 2014 8:55 a.m. ET

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Aa

The 'supercycle' that drove commodities higher has now reversed



Out with the old: Commodities are in a so-called secular bear market that may stretch for years.

The Trust

- Data and numbers don't speak for themselves
- We speak for them
- Often in self serving ways
- Do we have the right
 - Data?
 - Technology?
 - Incentives?
 - Processes?



Noise= Distraction

Signal= Truth

We aren't very good at distinguishing between the two

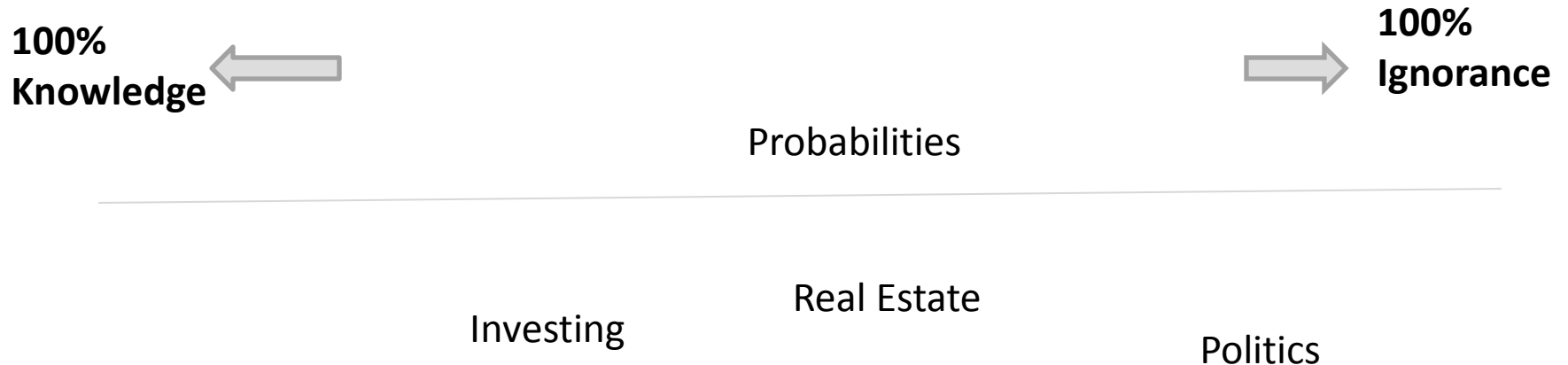
Noise

- What people say in a committee hearing

Signal

- What motivates someone

Think Probabilistically



For everything in between the poles, there is a need for us to think probabilistically

How to Think Probabilistically

It doesn't come naturally
to anyone



- If someone says something is “certain” or “has no chance”, ask whether the odds aren’t more like 15%
- If you think you have knowledge, make a falsifiable prediction
 - What information are you ignoring as you fit to your biases?
 - When you have to predict, give a range, not a single point

Scrutinize Your Own Biases

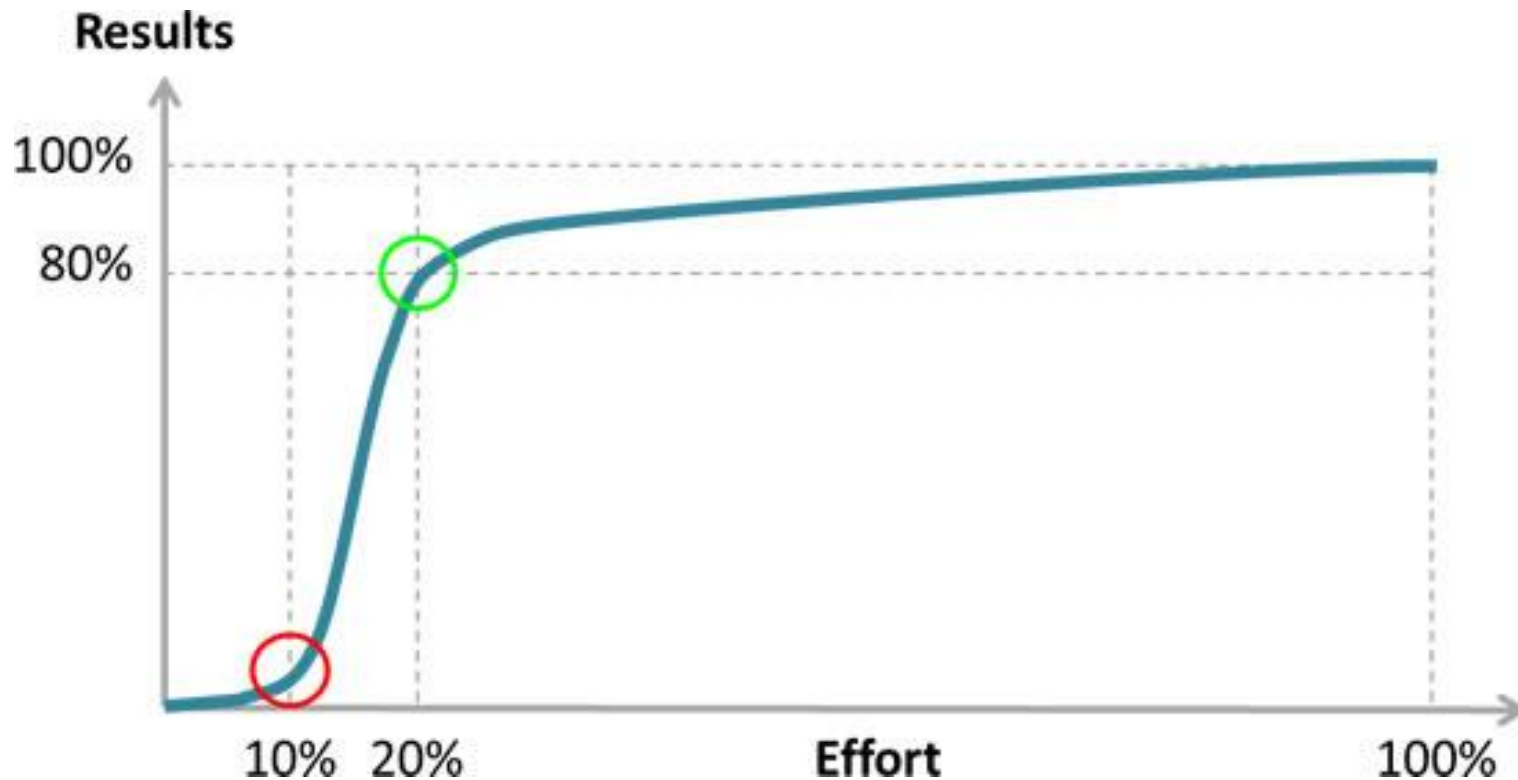


Danger

1. A lack of information
 - Nuclear reactor built with 8.6 earthquake “max”
 - 9.1, March 2011, Fukushima
2. Diminishing Returns from information

OR

3. Information Growth > Understanding



We create narratives

- We seem to need a cause and effect narrative
- We jump at chances to tell self-serving stories
- We tend to see the past as something that was bound to happen the way it did



12 Common Errors/Biases

1. Small Sample Size

- LTCM only 20 years of data
- Home prices always go up (1896-1996 even w/inflation)

2. False Positives

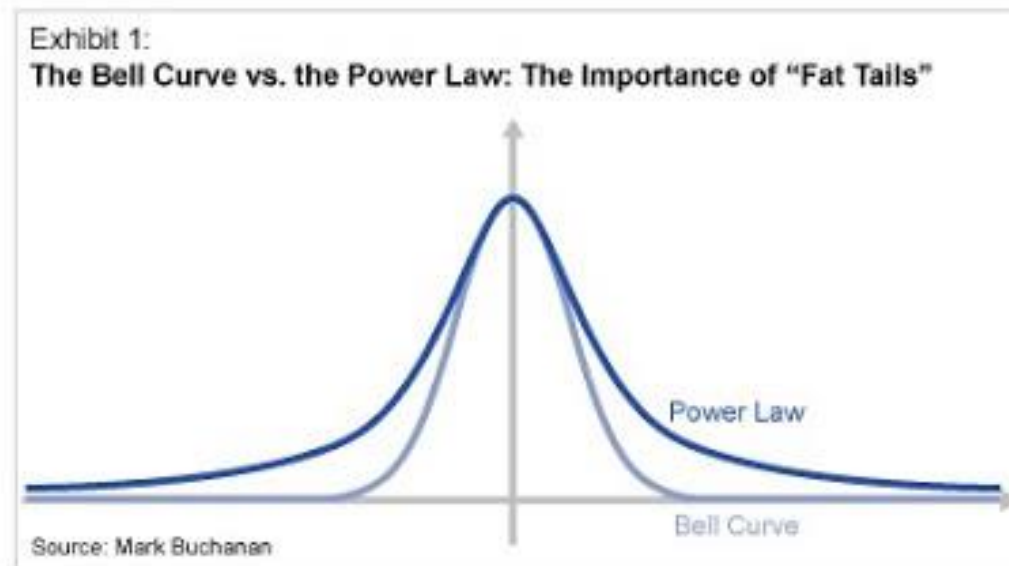
- Seeing patterns in random noise
- Very difficult to watch a game and not start reacting to what you are seeing



Common Errors/Biases

3. Ignorance of Fat Tails

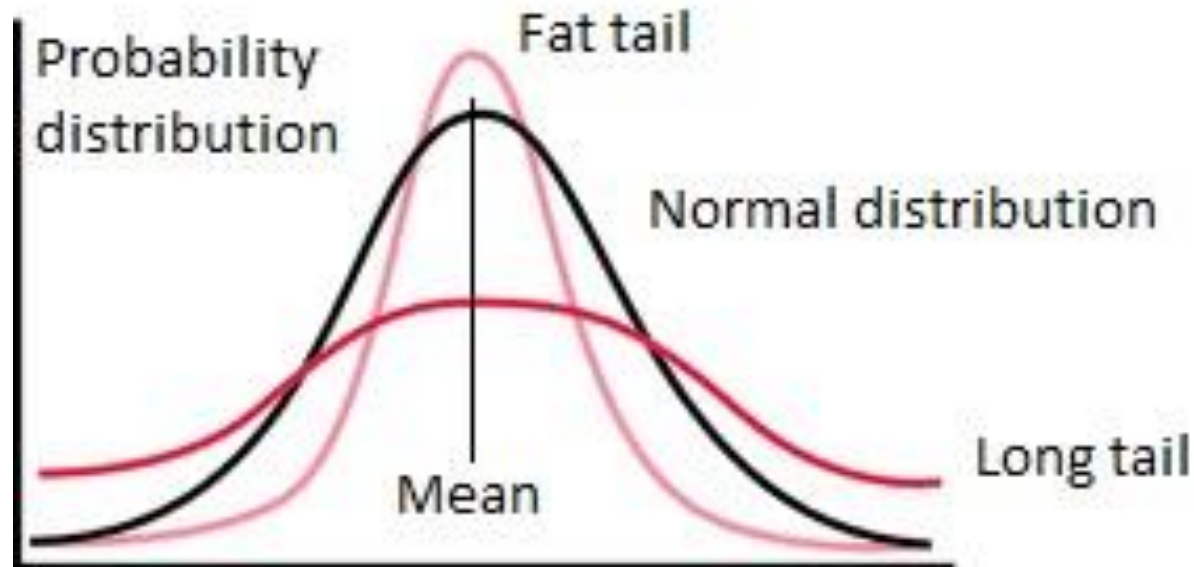
- Stock market regularly does things that model at, for example, once in 7000 years
- The economy had 2 “five hundred year storms” within a decade (2000-02, 2007-09)



Common Errors/Biases

4. How to Handle Tail Events?

- 1/30 chance of 6.75+ earthquake in SF/LA every year
- 1/200 chance of same in SLC
- What does that mean?
 - Should we behave differently?
 - How?



Common Errors/Biases

5. Trying to Get Attention

- Bold predictions get our attention
- Overconfidence is persuasive, when it should send us running

6. Overreacting to Recent Events

- SI and Madden “Cover Jinx”
- Reversion to the mean

Sports Illustrated

Common Errors/Biases

7. Incentive Bias

- Rain forecast, doesn't happen, 😊
- Rain not forecast, does happen, ☹️
- Rain is “over-forecast”
- 50/50 weather predictions? never
- 7+ day forecasts can't be made (chaos theory)

8. Confusing “Risk” and “Uncertainty”

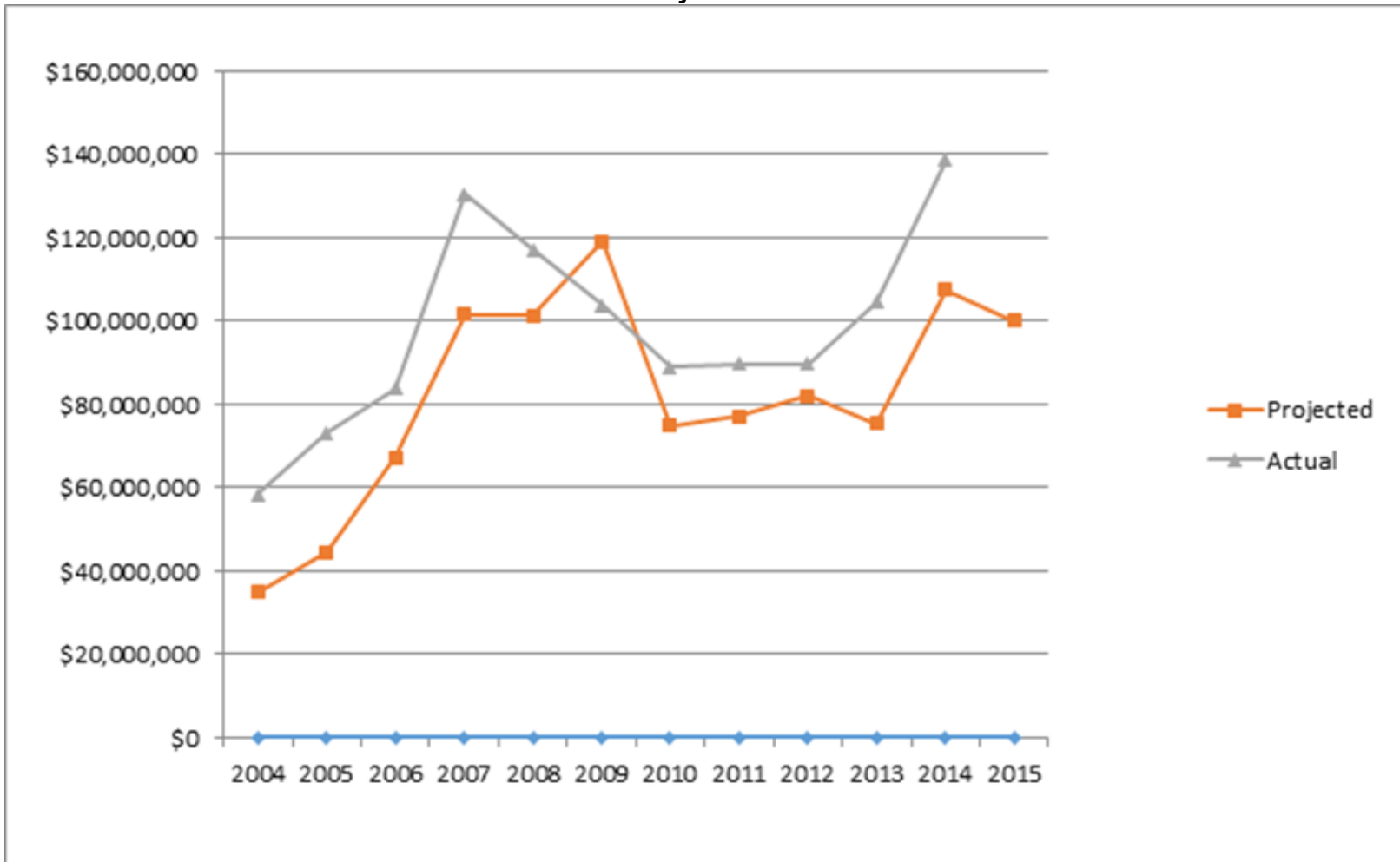
- Risk can be priced
- Uncertainty Can't

The logo for The Weather Channel, featuring the words "The Weather Channel" in white, bold, sans-serif font, stacked vertically on a solid blue rectangular background.

The
Weather
Channel

Incentive Bias?

SITLA Revenue Projections vs. Actual



Common Errors/Biases

9. Correlation Confusion

- 5 mortgages, each has 5% chance of default, what are chances all 5 will default?
 - Very hard to answer
 - 28 yr old dentist in Denver
 - 63 yr old carpenter in Cleveland
- Recent events show correlations much stronger than thought

10. Thinking Unfamiliar is Improbable

- Finance should have oldest and wisest in charge
- Naturally it attracts reckless youth

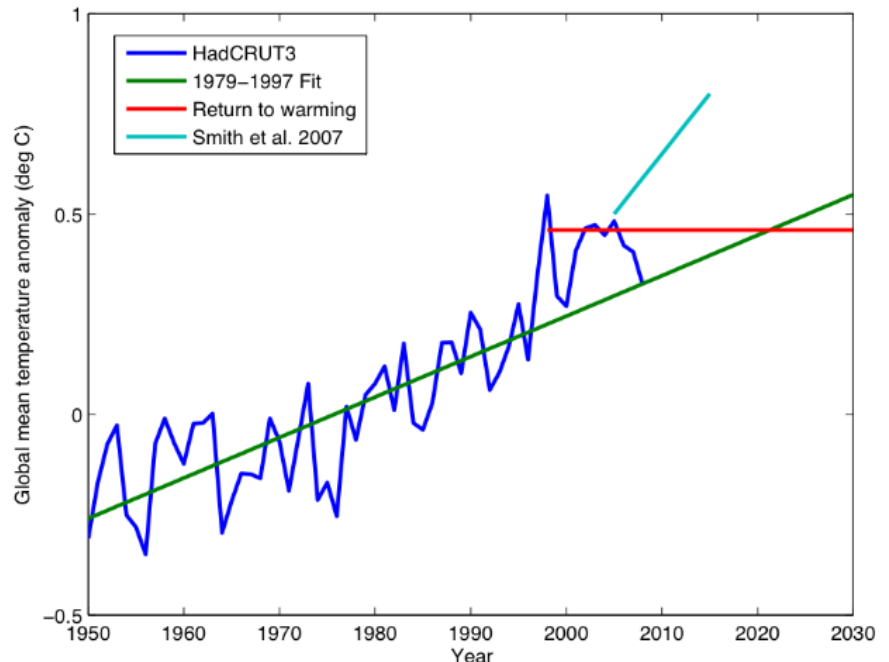
Common Errors/Biases

11. Moody Emotions

- When sentiment is good, run away from the stock market
- When sentiment is poor, buy like crazy

12. Ideological Bias

- A decade of global cooling



NEVER

Listen to Political Predictions

- Gore was up by 11% the day before 2000
- McLaughlin Group 40% wrong, 40% right, 20% mixed
- Stimulus “never over 8% unemployment” (10.1% Oct 09)
- No one predicted fall of USSR



Listen to Bold Economic Predictions

- Dec 07 WSJ poll “Only 38% of economists see recession in 2008”
- Moody’s AAA = 0.12%
1/850 chance of default in 5 years

2008 AAA rated= 28.0%
defaults by 2013, 1/3.5

Math & Computers

- Get all the #s you can
- Rigorously run the numbers
- Get multiple perspectives- make the best counter case you can
- Computers only have capabilities we give them
- Computer alone beats human alone
- Experienced, thoughtful Human adds 15%



1. Think Probabilistically



2. Try to be Unbiased

3. Be Less Confident